

## REMARKS

Claims 1-33 are pending in the application. The Examiner objected to the Specification. The Examiner objected to Claims 10, 13, 18 and 20 as containing informalities. The Examiner rejected Claims 1-33 under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. The Examiner rejected Claims 1 and 27 under 35 U.S.C. §112, second paragraph, based on an insufficient antecedent basis. The Examiner rejected Claims 10-17 under 35 U.S.C. §112, second paragraph, as being indefinite. The Examiner rejected Claims 15-17 under 35 U.S.C. §112, second paragraph, as being indefinite. The Examiner rejected Claims 18-26 under 35 U.S.C. §112, second paragraph, as being indefinite. The Examiner provisionally rejected Claims 1-3 and 6-33 under the judicially created doctrine of obviousness-type double patenting. The Examiner has rejected Claims 1-4, 8 and 9 under 35 U.S.C. §102(e) as being anticipated by Tong et al. (U.S. Patent 6,744,744). The Examiner has rejected Claim 5 under 35 U.S.C. §103(a) as being unpatentable over Tong et al. in view of Markarian et al. (U.S. Patent 6,611,940).

Please cancel Claims 1-9 and 27-33, without prejudice.

Please amend Claims 10-13, 15, 18, 19, 20, 22 and 23 as set forth herein. Please add new Claim 34. No new matter has been added.

Regarding the objection to the Specification, the Examiner stated that the Abstract should be amended on line 5 to change “give” to read “given”. The Abstract has been amended accordingly. Withdrawal of the objection is respectfully requested.

Regarding the objection to Claims 10, 13, 18 and 20 as containing informalities, each of these claims has been amended as per the Examiner’s suggestions. Withdrawal of the objections of Claims 10, 13, 18 and 20 is respectfully requested.

Regarding the rejection of Claims 1-33 under §112, first paragraph, as failing to comply

with the enablement requirement, the Examiner is requesting a further definition for a quasi-complementary turbo code (QCTC). The following description is presented for consideration. Further, an Information Disclosure Statement citing U.S. Patent 6,877,130 issued to Kim et al. has been filed herewith to assist in the understanding of a QCTC.

--A quasi-complementary turbo code (QCTC) is a code produced in an apparatus that includes a turbo encoder for generating information symbols and first and second parity symbols from an information bit stream, and a sub-code generator for generating sub-codes from the information symbols and the first and second parity symbols using puncturing matrices. The sub-code generator selects a number of information symbols equal to a number of columns in the initial puncturing matrix from the information symbols output from the turbo encoder, if a difference between the number  $N_s$  of selected symbols in the initial puncturing matrix and the number of the columns in the initial puncturing matrix is equal to or greater than a number of component encoders in the turbo encoder, and selects a number of first and second parity symbols equal to the difference. The QCTC is referred to as being "quasi-complementary" because the codes are not strictly complementary since repeated symbols do exist, but each sub-code exhibits a unique characteristic that enables the sub-codes to be distinguished from each other even though they are not complementary.--

Regarding the rejection of Claims 1 and 27 under §112, second paragraph, based on an insufficient antecedent basis, Claims 1 and 27 have been cancelled herein.

Regarding the rejection of Claims 10-17 under §112, second paragraph, as being indefinite, Claim 10 has been amended to address this issue. Based on at least the foregoing, withdrawal of the rejection of Claims 10-17 under §112 is respectfully requested.

Regarding the rejection of Claims 15-17 under §112, second paragraph, as being indefinite, Claim 15 has been amended to address this issue. Based on at least the foregoing, withdrawal of the rejection of Claims 15-17 under §112 is respectfully requested.

Regarding the rejection of Claims 18-26 under §112, second paragraph, as being indefinite, Claim 18 has been amended to address this issue. Based on at least the foregoing, withdrawal of the rejection of Claims 18-26 under §112 is respectfully requested.

Regarding the provisional rejection of Claims 6-26 under the judicially created doctrine

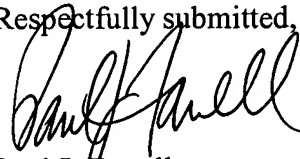
of obviousness-type double patenting, over co-pending Application Serial Nos. 10/074,422 or 10/680,815, both to Kim et al., Applicants respectfully reserve the right to address any and all of the provisional rejections based on the judicially created doctrine of obviousness-type double patenting, at such time when either the present application or the co-pending applications mature into a patent, or at least until such time as all other objections/rejections to the claims have been properly addressed.

Regarding the rejection of Claims 1-4, 8 and 9 under §102(e), and the rejection of Claim 5 under §103(a), Claims 1-9 have been Cancelled.

Independent Claims 10 and 18 are believed to be in condition for allowance. Without conceding the patentability per se of dependent Claims 11-17, 19-26 and 34, these are likewise believed to be allowable by virtue of their dependence on their respective amended independent claims. Accordingly, reconsideration and withdrawal of the rejections of dependent Claims 11-17, 19-26 and 34 is respectfully requested.

Accordingly, all of the claims pending in the Application, namely, Claims 10-26 and 34, are believed to be in condition for allowance. Should the Examiner believe that a telephone conference or personal interview would facilitate resolution of any remaining matters, the Examiner may contact Applicants' attorney at the number given below.

Respectfully submitted,



Paul J. Farrell  
Reg. No. 33,494  
Attorney for Applicant

DILWORTH & BARRESE  
333 Earle Ovington Blvd.  
Uniondale, New York 11553  
Tel: (516) 228-8484  
Fax: (516) 228-8516

PJF/MJM/dr